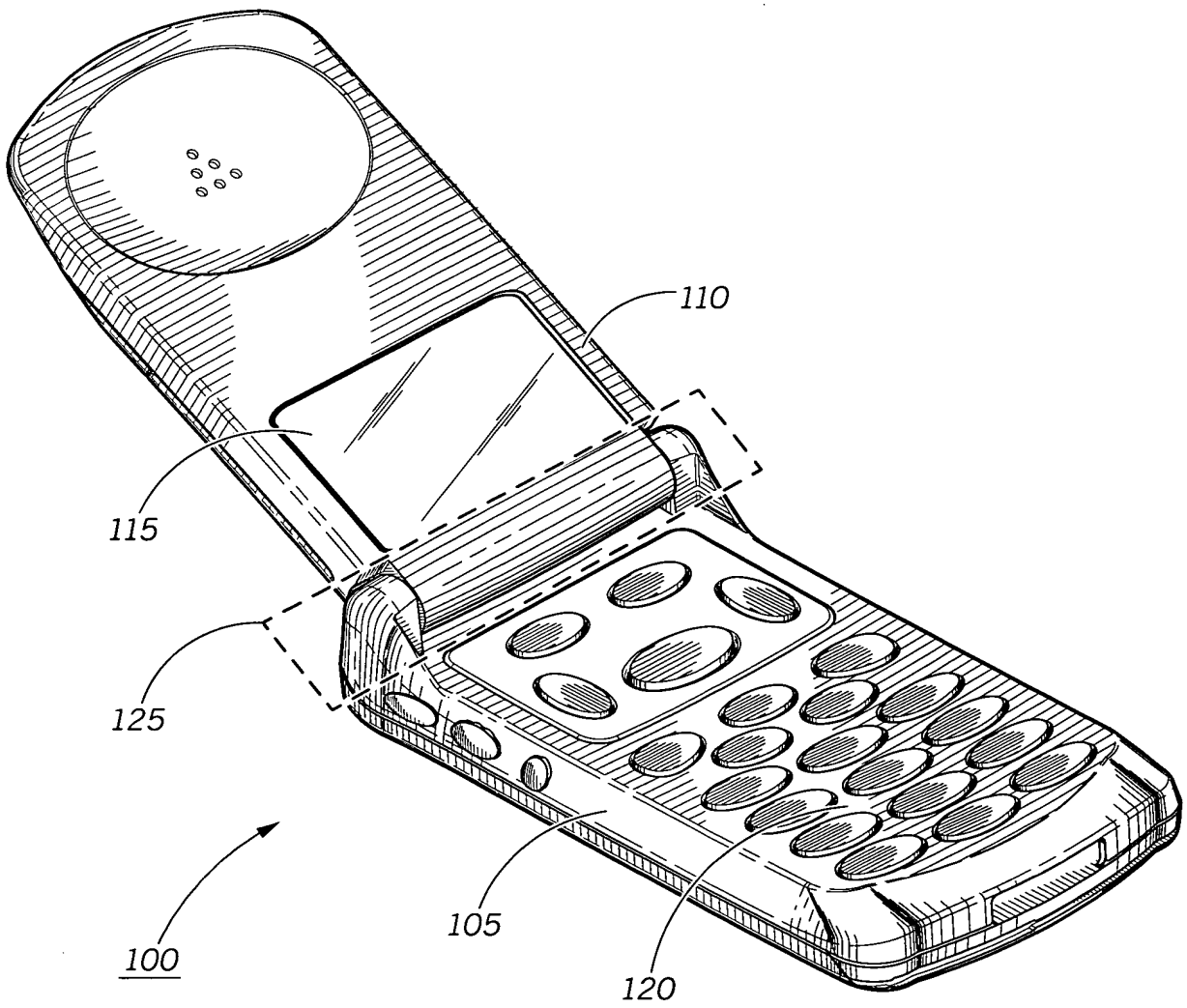

PRIOR ART

FIG. 1

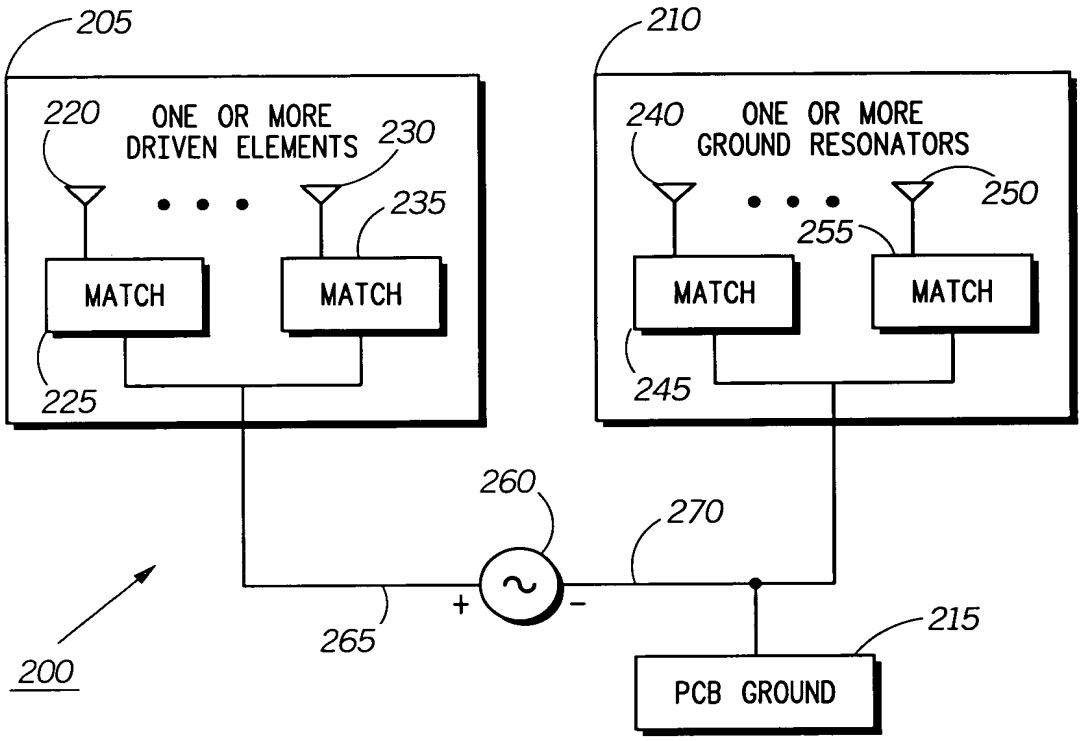
205
210
220
ONE OR MORE
DRIVEN ELEMENTS
230
235
MATCH
MATCH
225
240
ONE OR MORE
GROUND RESONATORS
250
255
MATCH
MATCH
245
260
270
+
-
265
200
215
PCB GROUND

FIG. 2

SCENARIO	ANT 1	ANT 2	ANT 3	ANT 4	DESCRIPTION
1	+	−	−	−	ANT1 USED AS MAIN ANTENNA, ANT2,3,& 4 AS GROUND RESONATORS
2	−	+	−	−	ANT 1 USED AS MAIN ANTENNA, ANT 2,3 AS GROUND RESONATORS
3	+	+	−	−	DIVERSITY WITH ANT1 & ANT2 AS MAIN ANTENNA, ANT3 & 4 AS GROUND RESONATORS
4	−	−	+	−	GROUND RESONATOR DIVERSITY WITH ANT1 & ANT2 & ANT4. ANT3 AS MAIN ANTENNA
5	+	−	+	−	DUAL POLARITY DIVERSITY
6	−	+	+	−	DUAL POLARITY DIVERSITY
7	+	+	+	−	THREE ELEMENT DIVERSITY WITH ON GROUND RESONATOR, ANT3
8	−	−	−	+	SAME AS #7, POLARITY REVERSAL
9	+	−	−	+	SAME AS #6, POLARITY REVERSAL
10	−	+	−	+	SAME AS #5, POLARITY REVERSAL
11	+	+	−	+	SAME AS #4, POLARITY REVERSAL
12	−	−	+	+	SAME AS #3, POLARITY REVERSAL
13	+	−	+	+	SAME AS #2, POLARITY REVERSAL
14	−	+	+	+	SAME AS #1, POLARITY REVERSAL
15	+	+	+	+	MAIN ANTENA AND ALL AUX ELEMENTS DRIVEN BY THE UNGROUNDED SIG.SOURCE TERMINAL

FIG. 3

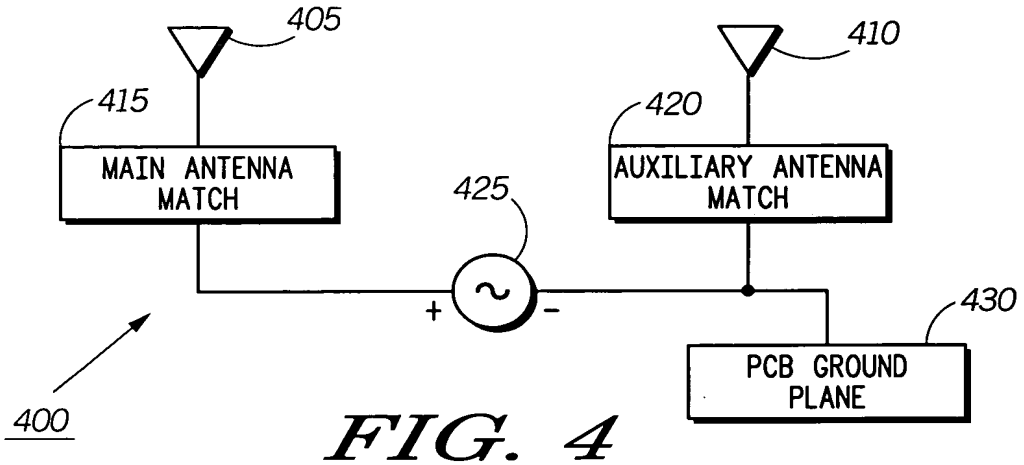

FIG. 4

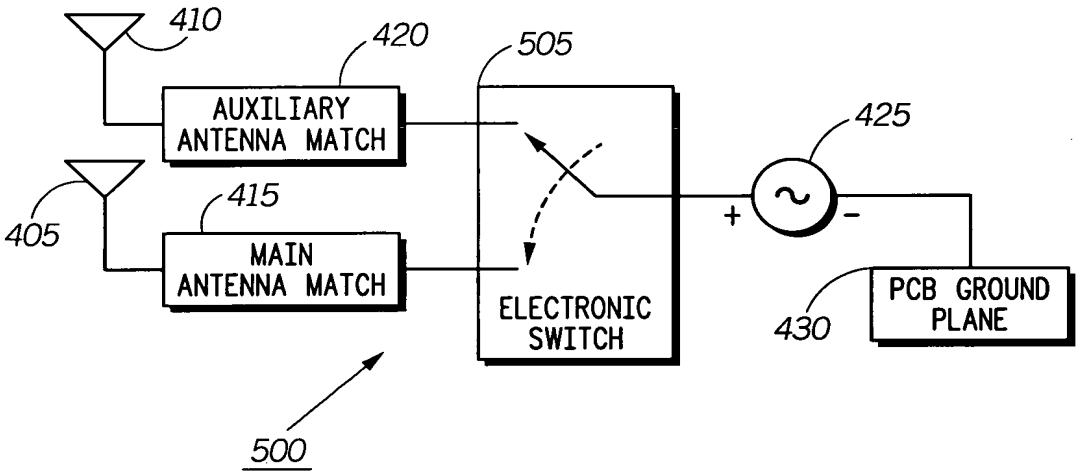

FIG. 5

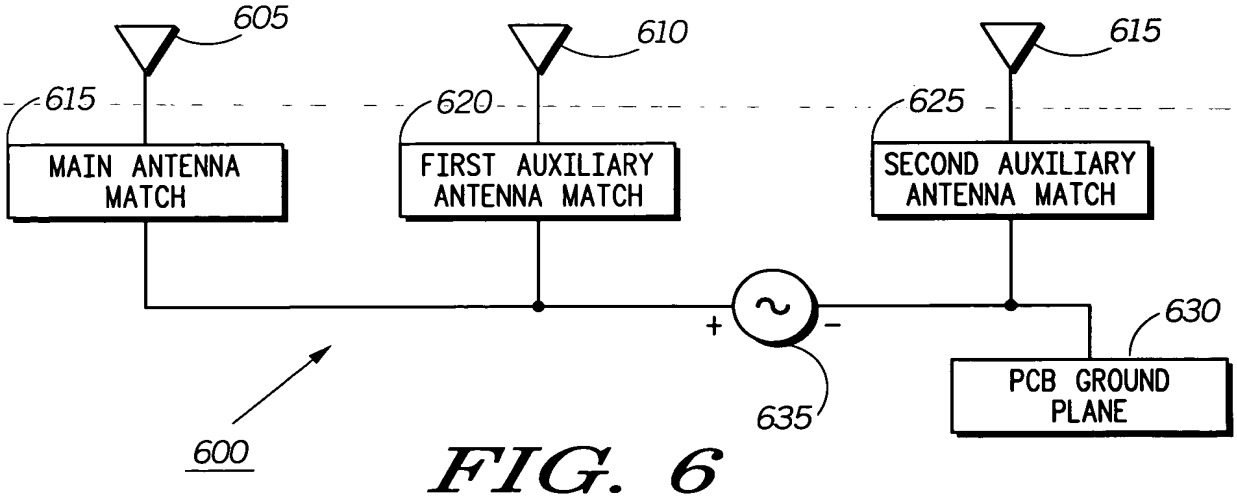

FIG. 6

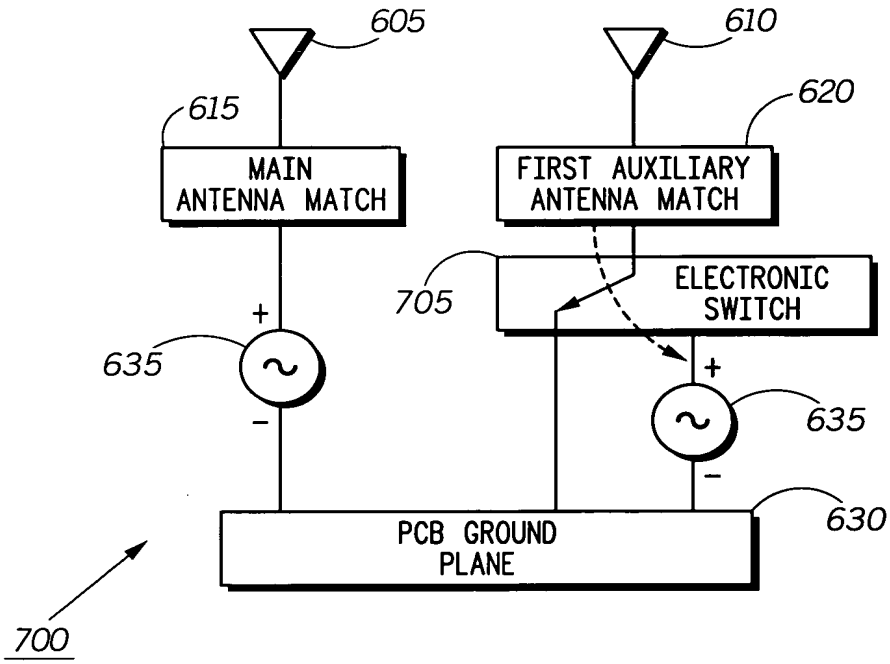
605
610
615
620
MAIN ANTENNA MATCH
FIRST AUXILIARY ANTENNA MATCH
705
ELECTRONIC SWITCH
+
635
-
+
635
-
630
PCB GROUND PLANE
700

FIG. 7

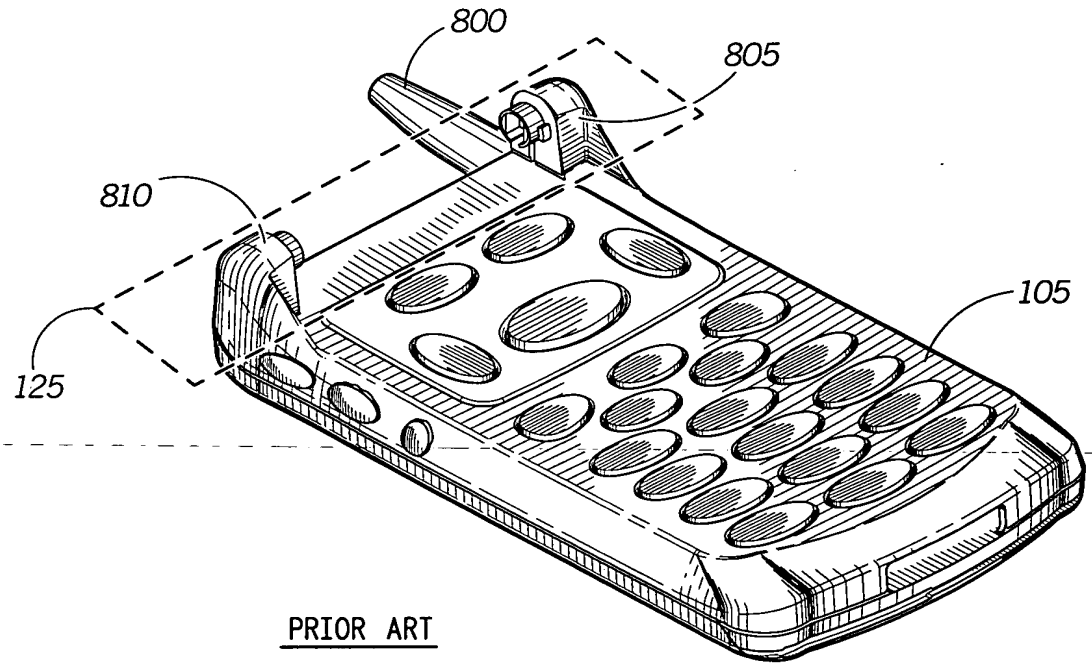
800
805
810
105
125
PRIOR ART

FIG. 8

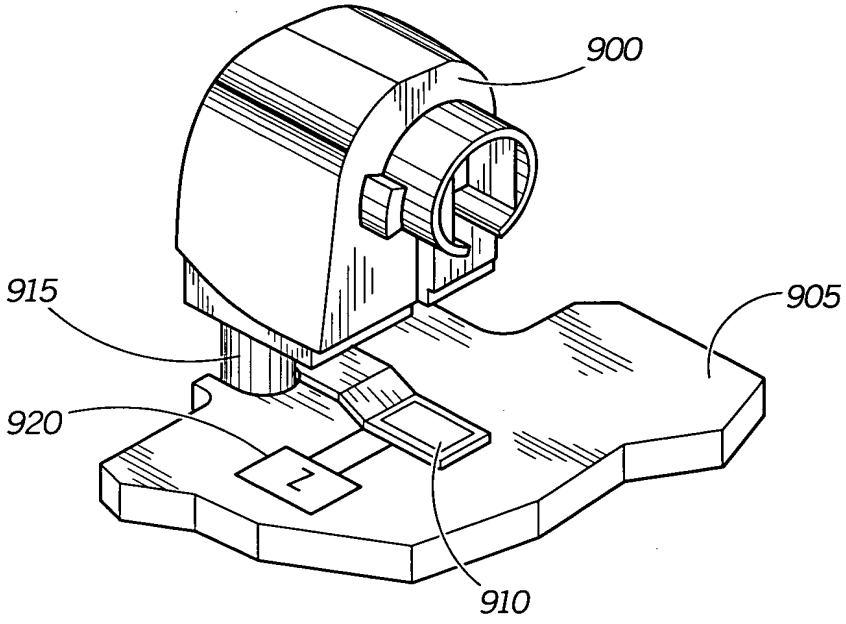

FIG. 9

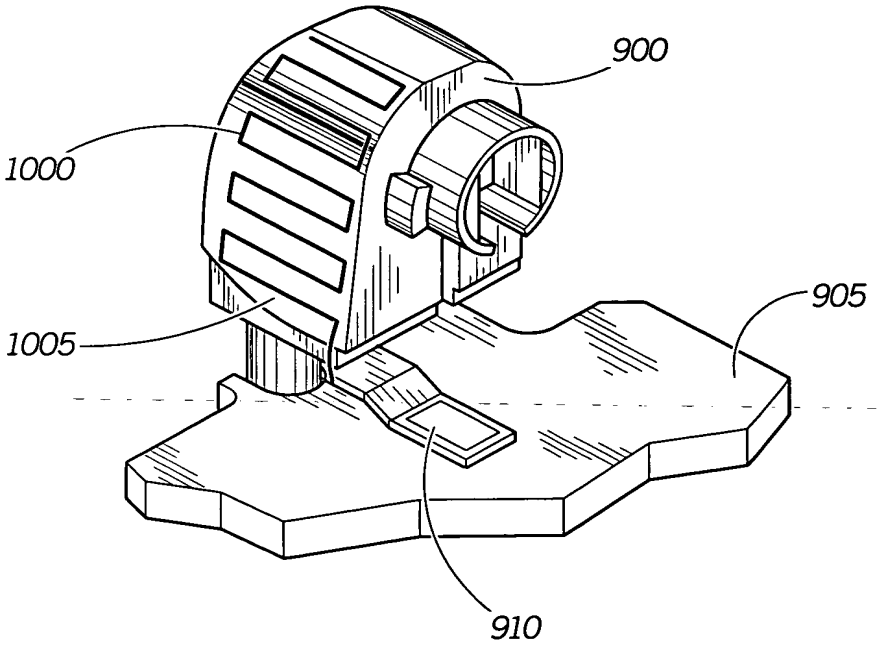

FIG. 10

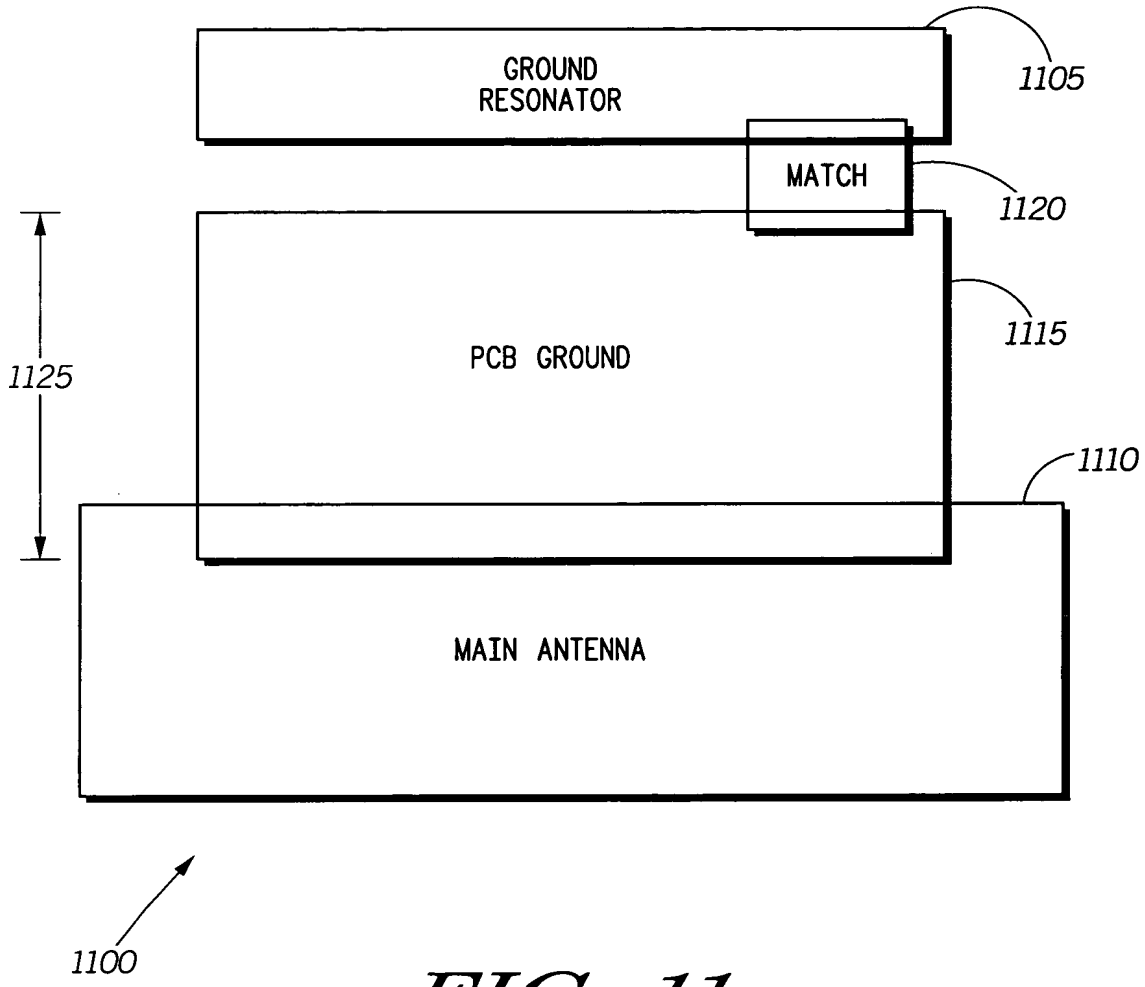
GROUND
RESONATOR
1105
MATCH
1120
1115
PCB GROUND
1125
1110
MAIN ANTENNA
1100

FIG. 11